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17901A HONEST JOHN, MISSILE NUMBER 2053, ROUND NUMBER 662 ASL, --ETC(U)
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gather for the launching of 17901A Honest John, Missile Number 2053, Round Number 662 ASL, are presented in tabular form.		

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CONTENTS

INTRODUCTION

1X901A HONEST JOHN, Missile Number 2053 , Round Number 662 ASL was launched from LC-33 , White Sands Missile Range (WSMR), New Mexico, at 1230 MDT, 25 September 1979 . The scheduled launch time was 1200 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

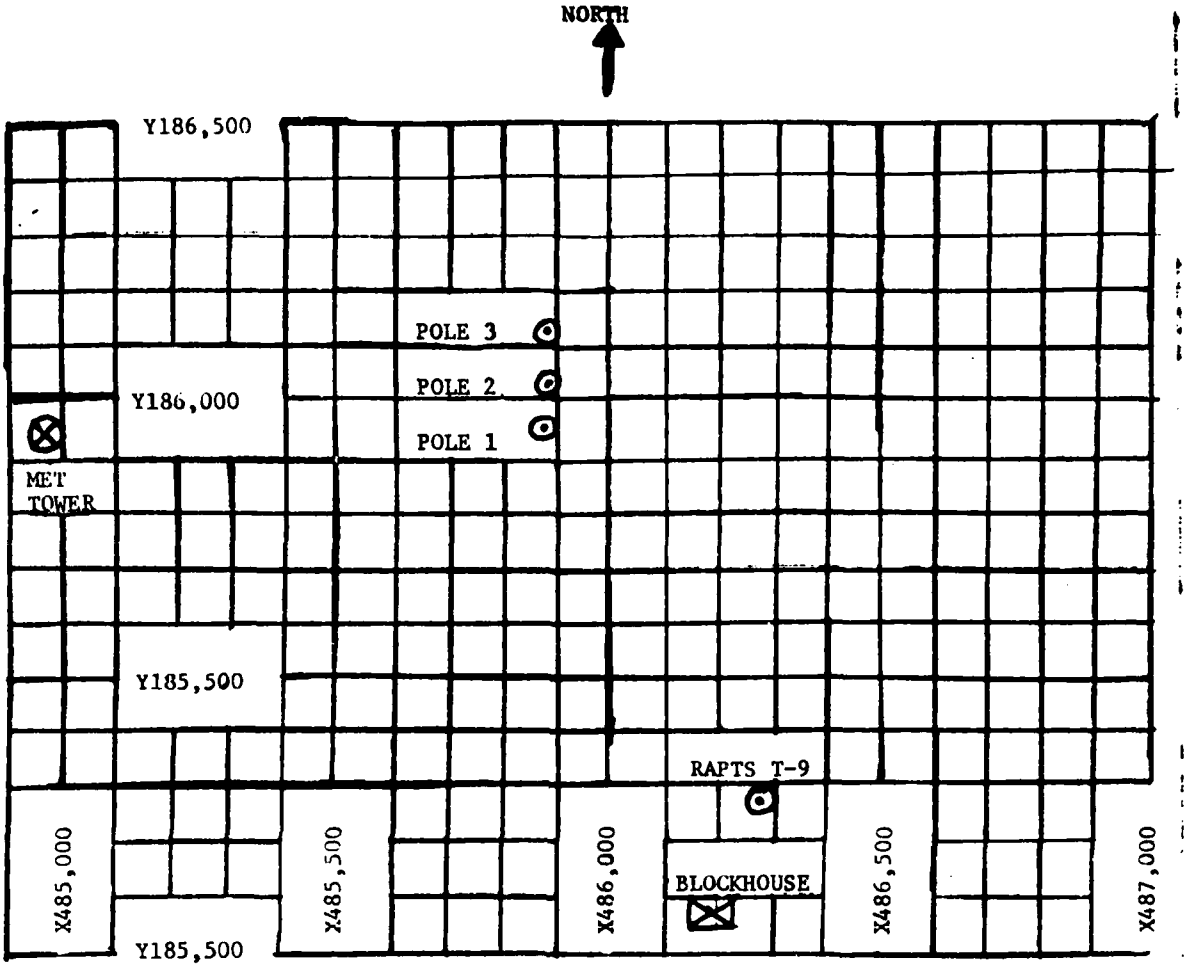
b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE
LC-33 3710 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 27,500 feet in 500-feet increments.

SITE AND TIME
WSD 1100 MST



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.

2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.

   (a) Pole #1 - 38.7 ft

   (b) Pole #2 - 53.0 ft

   (c) Pole #3 - 83.6 ft

3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

TABLE 1. Surface Observations taken at 1230 MDT, 25 September 1979, at LC-33, 17901A HONEST JOHN, Missile No. 2053, Round No. 662 ASL.

ELEVATION	3977.30	FT/MSL
PRESSURE	887.7	MBS
TEMPERATURE	27.6	^{o}C
RELATIVE HUMIDITY	21	%
DEW POINT	3.2	^{o}C
DENSITY	1022	GM/M^3
WIND SPEED	CALM	KTS
WIND DIRECTION		DEGREES
CLOUD COVER	CLEAR	

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	198	02	-30	147	02	-30		CALM
-20	198	02	-20	148	02	-20		CALM
-10	209	01	-10	148	02	-10		CALM
0.0	210	01	0.0	147	02	0.0		CALM
+10	189	00	+10	216	02	+10	180	01

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft AGL

TABLE 2

TYPE 17901A HONEST JOHN MISSILE NO. 2053 ROUND NO. 662 ASL

LAUNCHED FROM LC-33 DATE 25 September 1979 TIME 1230 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 Feet			LEVEL #2 62 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30		CALM	-30	132	01
-20		CALM	-20	132	01
-10		CALM	-10	132	01
0.0		CALM	0.0	132	01
+10		CALM	+10	132	01
LEVEL #3 102 Feet			**LEVEL #4 202 Feet**		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30		CALM	-30	MISG	03
-20	160	01	-20	MISG	03
-10	160	02	-10	MISG	03
0.0	162	01	0.0	MISG	05
+10	156	01	+10	MISG	06

WTSM COORDINATES: X484,982.64 Y185,057.73 H3983.00 (base)

TABLE 3

TYPE 17901A HONEST JOHN MISSILE NO. 2053 ROUND NO. 662 ASL

LAUNCHED FROM LC-33 DATE 25 September 1979 TIME 1230 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33 DATE 25 September 1979 TIME 1230 MDT

RELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

MISSILE TYPE 17901A HONEST JOHN MISSILE NO. 2053 ROUND NO. 662 ASL

MISSILE LAUNCHED FROM LC-33 DATE 25 September 1979 TIME 1230 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC		CALM	600	159	06	1200	144	13
30		CALM	630	153	06	1230	141	13
60	309	01	660	146	07	1260	138	13
90	283	01	690	140	07	1290	135	13
120	257	01	720	133	08	1320	131	12
150	253	02	750	137	09	1350	130	13
180	249	02	780	141	09	1380	129	13
210	245	03	810	145	09	1410	128	14
240	240	03	840	148	10	1440	127	14
270	236	04	870	148	10	1470	129	14
300	231	04	900	148	10	1500	130	14
330	226	04	930	148	10	1530	131	15
360	221	04	960	147	10	1560	132	15
390	218	04	990	147	10	1590	132	15
420	215	04	1020	147	10	1620	131	16
450	212	04	1050	147	10	1650	131	17
480	208	04	1080	144	10	1680	130	18
510	196	05	1110	144	11	1710	131	19
540	184	05	1140	144	11	1740	132	19
570	172	06	1170	144	12	1770	133	20

RELEASED FROM LC-33 DATE 25 September 1979 TIME 1230 MDT

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1800	133	20
1830	132	21
1860	130	22
1890	129	22
1920	127	22
1950	125	22
1980	123	23
2010	121	23
2040	118	23
2070	119	24
2100	119	25
2130	119	26
2160	119	27
2190	120	27
2220	121	27
2250	122	26
2280	122	26
2310	124	27
2340	125	28
2370	127	28
2400	128	29
2430	128	30
2460	128	30
2490	128	30
2520	128	30
2550	128	31
2580	128	31
2610	128	31
2640	127	31
2670	128	30
2700	129	30
2730	130	30
2760	131	28
2790	131	28
2820	131	27
2850	131	26

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
2880	130	25
2910	129	25
2940	128	24
2970	127	24
3000	126	23
3030	127	23
3060	128	23
3090	129	22
3120	129	21
3150	128	21
3180	126	21
3210	124	21
3240	122	20
3270	123	20
3300	123	18
3330	123	17
3360	123	16
3390	123	17
3420	122	17
3450	122	18
3480	121	18
3510	123	18
3540	124	18
3570	126	18
3600	127	17
3630	129	18
3660	130	18
3690	131	18
3720	132	18

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

STATION ALTITUDE 3989.00 FEET MSL
25 SEP. 79 1100 HRS MST
ASCENSION NO. 385

SIGNIFICANT LEVEL DATA
2080020385
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 5

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
888.1	3959.0	27.5	15.5	48.0
860.6	4898.1	23.9	2.7	25.0
850.0	5252.5	22.5	1.5	25.0
774.4	7882.4	16.4	-.5	32.0
700.0	10665.9	8.4	-2.5	46.0
683.8	11300.2	6.8	-5.6	40.0
674.8	11657.8	6.6	-11.3	26.0
666.0	12012.7	7.9	-17.9	14.0
612.6	14246.8	2.9	-20.4	16.0
500.0	19551.0	-8.0	-30.7	14.0
474.6	20876.6	-10.6	-32.1	15.0
445.0	22497.1	-13.5	-34.5	15.0
430.6	23319.5	-14.0	-34.9	15.0
400.0	25146.4	-18.1	-38.3	15.0
362.2	27556.6	-24.5	-43.6	15.0

STATION ALTITUDE 3989.00 FEET MSL
25 SEP. 79 1100 HRS MST
ASCENSION NO. 385

UPPER AIR DATA
2680203
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	868.1	27.5	15.5	48.0	1021.3	678.1	.0	.0	1.000302
4000.0	867.8	27.5	15.4	47.7	1021.1	678.0	155.9	.0	1.000301
4500.0	872.5	25.5	8.9	35.1	1012.8	674.9	155.9	1.1	1.000274
5000.0	857.5	23.5	2.4	25.0	1003.8	672.1	155.9	2.1	1.000255
5500.0	842.6	21.9	1.4	25.7	991.7	670.2	155.9	3.2	1.000250
6000.0	827.8	20.8	1.1	27.0	976.2	668.9	155.9	4.2	1.000247
6500.0	813.3	19.6	.8	28.3	964.8	667.6	145.0	5.9	1.000244
7000.0	799.0	18.4	.4	29.7	951.7	666.2	136.1	8.1	1.000240
7500.0	785.0	17.3	.0	31.0	938.8	664.9	131.4	9.9	1.000237
8000.0	771.1	16.1	-.4	32.6	926.1	663.5	128.3	11.6	1.000233
8500.0	757.2	14.6	-.6	35.1	914.0	661.8	126.1	12.7	1.000230
9000.0	743.6	13.2	-.9	37.6	902.1	660.2	124.2	13.5	1.000227
9500.0	730.3	11.8	-1.3	40.1	890.4	658.5	120.9	15.5	1.000224
10000.0	717.1	10.3	-1.8	42.7	878.8	656.6	118.7	17.8	1.000221
10500.0	704.2	8.9	-2.3	45.2	867.5	655.1	118.3	20.5	1.000218
11000.0	691.4	7.6	-4.2	42.8	856.0	653.5	118.9	23.1	1.000212
11500.0	678.8	6.8	-8.6	32.2	843.1	652.4	122.7	25.0	1.000203
12000.0	666.3	7.9	-17.6	14.4	825.3	653.3	125.0	26.2	1.000191
12500.0	654.0	6.8	-18.4	14.4	813.2	652.1	125.2	25.7	1.000188
13000.0	641.9	5.7	-19.0	14.9	801.4	650.8	123.9	24.2	1.000185
13500.0	630.1	4.6	-19.5	15.3	789.8	649.5	121.1	22.1	1.000182
14000.0	618.5	3.5	-20.1	15.8	778.3	648.2	121.6	20.2	1.000179
14500.0	606.9	2.4	-20.9	15.9	766.8	646.9	122.6	18.5	1.000177
15000.0	595.4	1.4	-21.9	15.7	755.0	645.7	124.7	18.0	1.000174
15500.0	584.0	.3	-22.8	15.5	743.5	644.4	126.7	17.6	1.000171
16000.0	573.0	-.7	-23.8	15.3	732.2	643.2	128.6	17.3	1.000168
16500.0	562.1	-1.7	-24.8	15.2	721.0	642.0	130.3	16.6	1.000165
17000.0	551.4	-2.8	-25.8	15.0	710.0	640.8	131.1	14.0	1.000162
17500.0	540.9	-3.8	-26.7	14.8	699.2	639.5	133.2	11.8	1.000159
18000.0	530.6	-4.8	-27.7	14.6	688.6	638.3	139.2	10.8	1.000157
18500.0	520.6	-5.8	-28.7	14.4	678.1	637.1	145.1	10.5	1.000154
19000.0	510.7	-6.9	-29.7	14.2	667.8	635.8	148.7	11.6	1.000152
19500.0	501.0	-7.9	-30.6	14.0	657.7	634.6	151.1	11.3	1.000149
20000.0	491.2	-8.9	-31.2	14.3	647.4	633.4	153.2	9.6	1.000147
20500.0	481.7	-9.9	-31.7	14.7	637.1	632.2	161.7	7.2	1.000144
21000.0	472.3	-10.8	-32.3	15.0	627.0	631.1	191.3	4.7	1.000142
21500.0	463.0	-11.7	-33.0	15.0	616.8	630.0	237.3	4.4	1.000139
22000.0	453.9	-12.6	-33.8	15.0	606.7	628.9	268.3	6.0	1.000137
22500.0	444.9	-13.5	-34.5	15.0	596.8	627.8	277.9	8.2	1.000135
23000.0	436.1	-13.8	-34.8	15.0	585.7	627.5	278.3	10.1	1.000132

STATION ALTITUDE 3989.00 FEET MSL
25 SEP. 79 1100 HRS MST
ASCENSION NO. 365

UPPER AIR DATA
20800203B5
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 6 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	427.5	-14.4	-35.3	15.0	575.4	626.7	278.3	12.0	1.000130
24000.0	416.9	-15.5	-36.2	15.0	560.4	625.4	278.0	13.9	1.000128
24500.0	410.6	-16.6	-37.1	15.0	557.5	624.0	280.3	15.3	1.000126
25000.0	402.4	-17.8	-38.0	15.0	548.6	622.6	283.5	16.6	1.000124
25500.0	394.2	-19.0	-39.1	15.0	540.3	621.1	285.2	17.3	1.000122
26000.0	386.2	-20.4	-40.2	15.0	532.1	619.5	286.5	17.9	1.000120
26500.0	378.3	-21.7	-41.3	15.0	524.0	617.8			1.000118
27000.0	370.6	-23.0	-42.4	15.0	516.1	616.2			1.000116
27500.0	363.0	-24.3	-43.5	15.0	508.3	614.5			1.000114

STATION ALTITUDE 3989.00 FEET MSL
25 SEP. 79 1100 HRS MST
ASCENSION NO. 305

MANDATORY LEVELS
2080203
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 7

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	5249.	22.5	1.5	25.	155.9	2.6
800.0	6965.	18.5	.4	30.	136.5	7.9
750.0	8765.	13.9	-.8	36.	125.0	13.1
700.0	10655.	8.4	-2.5	46.	118.2	21.4
650.0	12655.	6.4	-18.6	15.	125.3	25.5
600.0	14769.	1.8	-21.5	10.	123.9	18.2
550.0	17070.	-2.9	-25.9	15.	131.3	15.6
500.0	19523.	-8.0	-30.7	14.	151.2	11.2
450.0	22183.	-13.0	-34.1	15.	276.2	7.0
400.0	25104.	-18.1	-38.3	15.	284.3	17.0